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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,876	07/07/2004	Albert-Claude Boccara	0510-1101	1175
466	7590	05/05/2006		
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			EXAMINER ANDERSON, DENISE BROWN	
			ART UNIT 2877	PAPER NUMBER

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/500,876

Applicant(s)

BOCCARA ET AL.

Examiner

Denise B. Anderson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/7/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if

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the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Objections***

Claim 1 is objected to because of the following informalities: there is insufficient antecedent basis for the word "the sample". Examiner suggests replacing with the word "object" Appropriate correction is required.

Claim 10 is objected to because of the following informalities: there is insufficient antecedent basis for the word "it". Examiner suggests replacing with the word "device" Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-10 are rejected.**

**Claims 1-4 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Medford et al (USPN 6,608,717), and further in view of Kopelman et al (USPN 6,379,955).**

As to claims 1-4, and 10, Medford et al disclose, in figure 1, a sample (embryo) visualized through a Michelson interferometer. Microscopic visualization in three dimensions (column 10, lines 46-67), a wide spectrum source (column 6, lines 61-64), a detector (photodiode in figure 1); means to form a picture of a thin slice on the detector

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(column 8, lines 1-5; column 10, lines 46-67); and a unit for processing the picture (computer in figure 1)

Medford et al does not expressly disclose the insertion of local probes into the sample/object.

Kopelmann et al disclose the insertion of local probes into a sample for 3-D visualization (column 10, line 60 through column 11, line 18). The probes used are fiberless metallic pebble (i.e., balls) sensors (see also column 3, lines 43-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention to insert the local probes of Kopelmann et al into the sample of Medford et al for the purpose of monitoring the sample at more than one location (as described by Kopelmann et al in column 2, lines 20-32).

As to claim 7, Medford et al discloses a wide coherence source (column 6, lines 61-64).

As to claim 8, Medford et al discloses a wide coherence source with short light pulses (column 2, lines 59-67).

As to claim 9, Medford et al discloses optical means for forming a picture of a thin slice of the object on a matrix detector via the interferometer (column 8, lines 1-5; column 10, lines 46-67)

**Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Medford et al (USPN 6,608,717) and Kopelman et al (USPN 6,379,955), and further in view of Li et al (Opt. Lett. Vol. 25, No. 20, pp.1505, 2000).**

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As to claims 5 and 6, Medford et al and Kopelmann et al disclose the claimed invention except for use as a Linnik and Mirau interferometer. Li et al discloses that the 3-D imaging device can include a Michelson, Linnik or Mirau interferometer (pp. 1505, left column, lines 12-15. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an appropriate interferometric architecture for the purpose of achieving the type of measurement desired.

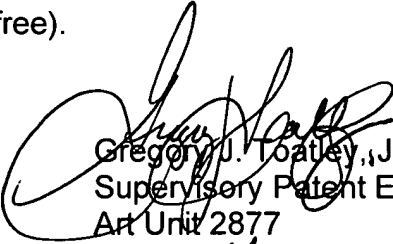
***Fax/Telephone Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise B. Anderson whose telephone number is 571-272-8324. The examiner can normally be reached on Mon-Fri (9:30 AM - 6 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Denise B Anderson, PhD  
Assistant Patent Examiner  
Art Unit 2877

  
Gregory J. Toatley, Jr.  
Supervisory Patent Examiner  
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1 May 06

DBA   
Date Signed: 4/28/06